



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,163	02/19/2004	Brian M. Sager	NSL-024	5003

27652 7590 08/08/2005

JOSHUA D. ISENBERG  
204 CASTRO LANE  
FREMONT, CA 94539

EXAMINER

XU, LING X

ART UNIT	PAPER NUMBER
----------	--------------

1775

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/782,163

Applicant(s)

SAGER, BRIAN M.

Examiner

Ling X. Xu

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.  
4a) Of the above claim(s) 29-31 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1,2,7,9-13,17-26 and 28 is/are rejected.  
7) ☒ Claim(s) 3-6, 8, 14-16 and 27 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. The Election/Restriction had been made final in the prior Office action dated on 3/18/2005 and the method claims had been withdrawn from further consideration. Accordingly, the amendment made in the method claims filed on 6/17/2005 will not be considered in this Office action. However, if the product claims are later found to be allowable, the method claims, which encompass all the limitations of the product claims, will be rejoined.

### ***Claim Rejections - 35 USC § 102***

2. Claims 1-2, 9-10, 12, 17 and 19-23 stand rejected under 35 U.S.C. 102(b) as being anticipated by Huang et al (Chem. Comm., 2000, p1063-1064) for the same reasons of record set forth in the Office action dated on 3/18/2005.

3. Claims 1-2, 7, 11-13, 17-26 and 28 stand rejected under 35 U.S.C. 102(e) as being anticipated by Xiao et al. (US 2005/005874) for the same reasons of record set forth in the Office action dated on 3/18/2005.

### ***Allowable Subject Matter***

4. Claims 3-6, 8, 14-16 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Response to Arguments*

5. Applicant argues that neither Xiao nor Huang teaches coating the walls of the pores as recited in claims 1 and 24. The applicant submits that coating the pore walls is different from filling the pores. The Applicant also notes that coating and filling have been used as separate terms in the description page 1, lines 25-25 and page 3, lines 21-22 in the present application.

With respect reference Xiao, the terms filling and coating have same or similar meaning. For example, Xiao discloses that filling pores or cavities or coating with semiconductors of opposite type or precursors of conducting polymers on page 4, paragraph [0030]. Xiao also discloses that the semiconductor materials are filled into the channels by vapor deposition method (page 4, [0032]). Vapor deposition method is a well-known coating method.

With respect to reference Huang, the Ag nanowires has substantially uniform thickness and are continuous and essentially follow the curvature of nanoscale channels (page 1064, 3<sup>rd</sup> paragraph left column), which indicates that the Ag nanowires are not randomly filled in the channels. Accordingly, the Ag nanowires are considered to be a coating layer on the nanoscale channels.

With respect to the specification of the present application cited by the applicants that the term coating and filling have been used as separate terms, the Examiner noted that there are no descriptions indicate that the term coating and filing have different meanings. In fact, it appears that, similar to Xiao discussed above, these terms can be interchangeable and have same/similar meanings as described in the specification of the present application (see page 3, lines 21-22).

*Conclusion*

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling X. Xu whose telephone number is 571-272-1546. The examiner can normally be reached on 8:00 - 4:30 Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah D. Jones can be reached on 571-272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1775

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ling X. Xu  
Examiner  
Art Unit 1775